UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

NPDES PERMIT NO. NN 0022179

In compliance with the provisions of the Clean Water Act ("CWA") (Public Law 92-500, as amended, 33 U.S.C. 1251 et seq.), the following discharger is authorized to discharge from the identified facility at the outfall location(s) specified below, in accordance with the effluent limits, monitoring requirements, and other conditions set forth in this permit:

Discharger Name	Peabody Western Coal Company
Discharger Address	P.O. Box 650
	Kayenta, AZ 86033
Facility Name	Black Mesa Complex
Facility Location Address	Route 41
	Kayenta, AZ 86033
Facility Rating	Major

Outfall Number	General Type of Waste Discharged	Outfall Latitude	Outfall Longitude	Receiving Water
Over 100 Outfalls listed in Appendix A -C	Alkaline Mine Drainage, Coal Preparation Areas, Western Alkaline Reclamation,	Over 100 Outfalls listed in Appendix A -C	Over 100 Outfalls listed in Appendix A -C	Coal Mine Wash, Moenkopi Wash, Dinnebito Wash, Yellow River Canyon and tributaries

This permit was issued on:	
This permit shall become effective on:	
This permit shall expire at midnight on:	
In accordance with 40 CFR 122.21(d), the discharger shall submit a new application for a permit at least 180 days before the expiration date of this permit, unless permission for a date no later than the permit expiration date has been granted by the Director.	

Signed this _____ day of _____, 2009, for the Regional Administrator.

_____
Alexis Strauss, Director
Water Division

SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. Alkaline Mine Drainage Outfalls

During the period beginning on the effective date of this permit and lasting through the date of expiration, the permittee is authorized to discharge mine drainage from the Outfall Numbers listed in Appendix A – "Alkaline Mine Drainage" to the receiving waters listed in Appendix A – "Alkaline Mine Drainage.

Such discharges shall be limited and monitored by the permittee as specified below. Samples shall be collected prior to mixing with other waste source stream and/or discharge to surface waters.

Table A-1: Alkaline Mine Drainage Effluent Limitations and Monitoring Requirements

Effluent Parameter	**Units**	**Monthly Average**	**Maximum For any 1 day**	**Monitoring Frequency (1)**	**Sampling Type**
Flow	MGD	- -	- -	Continuous	Calculated(2)
TSS	mg/L	35	70	1/day(1)	Discrete
Iron, total	mg/L	3.5	7.0	1/day(1)	Discrete
pH	std. units	between 6.5 to 9.0		1/day(1)	Discrete

NOTES:
(1) Samples shall be taken once during each occurrence or once every 24 hours if the duration of the occurrence is greater than 24 hours.
(2) To determine total flow in gallons for each discharge and duration of discharge.

2. Coal Preparation Plants, Storage Areas, and Ancillary Area Runoff Outfalls

During the period beginning on the effective date of this permit and lasting through the date of expiration, the permittee is authorized to discharge runoff from the Outfall Numbers listed in Appendix B – "Coal Preparation & Associated Areas" to the receiving waters listed in Appendix B – "Coal Preparation & Associated Areas".

Such discharges shall be limited and monitored by the permittee as specified below. Samples shall be collected prior to mixing with other waste source stream and/or discharge to surface

waters.

Table A-2: Coal Preparation Areas Effluent Limitations and Monitoring Requirements

Effluent Parameter	**Units**	**Monthly Average**	**Maximum For any 1 day**	**Monitoring Frequency (1)**	**Sampling Type**
Flow	MGD	- -	- -	Continuous	Calculated(2)
TSS	mg/L	35	70	1/day(1)	Discrete
Oil and Grease	mg/L	15	--	1/day(1)	Discrete
Iron, total	mg/L	3.5	7.0	1/day(1)	Discrete
pH	std. units	between 6.5 to 9.0		1/day(1)	Discrete

NOTES:
(1) Samples shall be taken once during each occurrence or once every 24 hours if the duration of the occurrence is greater than 24 hours.
(2) To determine total flow in gallons for each discharge and duration of discharge.

3. <u>Western Alkaline reclamation, brushing and grubbing, topsoil stockpiling, and regraded area Outfalls.</u>

During the period beginning on the effective date of this permit and lasting through the date of expiration, the permittee is authorized to discharge runoff from the Outfall Numbers listed in Appendix C – "Western Alkaline Reclamation Areas" to the receiving waters listed in Appendix C – "Western Alkaline Reclamation Areas".

Such discharges shall be limited and monitored by the permittee as specified below. The permittee must:

a) submit a site-specific Sediment Control Plan for EPA approval demonstrating that implementation of the Sediment Control Plan will result in average annual sediment yields that will not be greater than the sediment yield levels from pre-mined, undisturbed conditions. The Sediment Control Plan shall, at a minimum, identify Best Management Practices (BMPs), including design specifications, construction specifications,

maintenance schedules, criteria for inspection, and expected performance and longevity of the BMPs.

b) demonstrate using watershed models that the implementation of the Sediment Control Plan will result in average annual sediment yields that will not be greater than the sediment yield levels from pre-mined, undisturbed conditions. The watershed model must be the same model that is being used to acquire the permittee=s SMCRA permit.

c) design, implement, and maintain the BMPs in the manner specified in the approved Sediment Control Plan throughout the term of this permit.

d) revise the Sediment Control Plan to incorporate new areas. As existing outfalls defined in this permit as Aalkaline mine drainage@ are reclaimed, the approved Sediment Control Plan shall be updated to incorporate the newly reclaimed outfalls into this subpart. A revised Sediment Control Plan and revised watershed model must be submitted to EPA and approved by EPA before it becomes effective. Revisions to the Sediment Control Plan must meet all requirements contained at 40 CFR Part 434.82, and 100% of the drainage area to an outfall must meet the definition of "western alkaline reclamation, brushing and grubbing, topsoil stockpiling, and regraded areas" (as defined at 40 CFR 434.80) to be considered for coverage. EPA=s approval of an updated Sediment Control Plan and reclassification of an existing outfall from Aalkaline mine drainage@ to a reclaimed area will be considered a minor modification to the permit as described in Section C of this permit.

4. <u>Discharges resulting from precipitation events</u>

a) Discharges resulting from precipitation events less than or equal to a 10-year, 24-hour precipitation event (1.80 inches within a 24 hour period)

During the period beginning on the effective date of this permit and lasting through the date of expiration, the permittee is authorized to discharge runoff from all Outfalls resulting from precipitation events less than or equal to a 10-year, 24-hour precipitation event (1.80 inches within a 24 hour period).

Such discharges shall be limited and monitored by the permittee as specified below. Samples shall be collected prior to mixing with other waste source stream and/or discharge to surface waters.

During precipitation events, samples may be collected from a sampling point representative of the type of discharge, rather than from each point of discharge. At no

time shall less than 20% of discharges be sampled. If samples are collected from a representative point, the permittee shall specify the Outfalls being represented in the quarterly report narrative.

Table A-4-a: Discharges from precipitation events less than 10-yr, 24-hr event.

Effluent Parameter	**Units**	**Maximum For any sample**	**Monitoring Frequency (1)**	**Sampling Type**
Flow	MGD	- -	Continuous	Calculated(2)
Settleable Solids (SS)	ml/l	0.5	1/day(1)	Discrete
pH	std. units	between 6.5 to 9.0	1/day(1)	Discrete

NOTES:
(1) Samples shall be taken once during each occurrence or once every 24 hours if the duration of the occurrence is greater than 24 hours.
(2) To determine total flow in gallons for each discharge and duration of discharge.

b) Discharges resulting from precipitation events great than a 10-year, 24-hour precipitation event (1.80 inches within a 24 hour period)

During the period beginning on the effective date of this permit and lasting through the date of expiration, the permittee is authorized to discharge runoff from all Outfalls resulting from precipitation events greater than a 10-year, 24-hour precipitation event (1.80 inches within a 24 hour period).

Such discharges shall be limited and monitored by the permittee as specified below. Samples shall be collected prior to mixing with other waste source stream and/or discharge to surface waters.

During precipitation events, samples may be collected from a sampling point representative of the type of discharge, rather than from each point of discharge. At no time shall less than 20% of discharges be sampled. If samples are collected from a representative point, the permittee shall specify the Outfalls being represented in the quarterly report narrative.

Table A-4-b: Discharges from precipitation events greater than 10-yr, 24-hr event.

Effluent Parameter	**Units**	**Maximum For any sample**	**Monitoring Frequency** [(1)]	**Sampling Type**
Flow	MGD	- -	Continuous	Calculated[(2)]
pH	std. units	between 6.5 to 9.0	1/day[(1)]	Discrete

NOTES:

(1) Samples shall be taken once during each occurrence or once every 24 hours if the duration of the occurrence is greater than 24 hours.

(2) To determine total flow in gallons for each discharge and duration of discharge.

5. <u>Seepage study</u>

Peabody Western Coal Company shall continue to implement the Seep Monitoring and Management plan designed to identify and characterize seeps; to identify those seeps that may pose a threat to water quality; and to establish Best Management Practices at seeps determined to pose a threat to water quality.

The plan shall be modified to address the construction of new impoundments, and shall include:

a. Identification of all seeps located within 100 meters downgradient of sediment impoundments including a record of the location, date, time, flow, proximity to waters of the United States, and accessibility by livestock.

b. Sampling (or summary of current data if sufficient and valid) of seepages identified in 5.a. for pH, Selenium (Total and Dissolved) and Nitrates. If Peabody submits past data, sampling techniques shall be described in order to determine validity of data. EPA, upon reviewing all data submitted, shall determine whether additional sampling should be performed.

c. Hydrogeologic modeling or studies in order to determine if the source the seeps are the impoundments and, if so, which impoundments.

d. Determination of source of Selenium and Nitrates, where data indicates that seepages have a reasonable potential to violate water quality standards.

The plan shall continue to be implemented as described in the "Interim Final Report – Seepage Monitoring and Management Report" April 1, 2008 and as approved by EPA .

The study results shall be submitted yearly to EPA.

EPA, upon reviewing the results of the study, may reopen the permit for the imposition of numerical limits and/or additional monitoring.

6. Gaging Stations

For the purpose of this permit, the gauge stations used to monitor rainfall for specific discharge points shall be:

Peabody Gauge No.		Discharge Points
1.	(ARG1)	048, 049, 050, 051, 052, 069, 070, 071, 087, 088, 089, 090, 147, 163, 169, 170, 171, 172, 173
5.	(ARG2R)	017, 018, 026, 027, 047, 086, 098, 105, 141, 142, 149, 178
7.	(ARG7R	008, 009, 013, 014, 016, 081, 094, 159, 160, 161, 162, 164, 165
8.	(ARG6R	024, 025, 030, 031, 032, 033, 039, 043, 103, 104, 127, 130, 133, 168
9.	(ARG9)	001, 002, 003, 005, 010, 012, 021, 022, 037, 045, 082, 083, 099, 139, 140, 150, 151, 153, 157
10.	(ARG3R)	054, 095, 106, 107, 118, 126, 136, 137, 143, 144, 152, 167, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194
11.	(ARG200)	079, 148, 174, 175, 176, 177, 179
12.	(ARG12)	180, 181, 182, 183

SECTION B. GENERAL DISCHARGE SPECIFICATIONS

All Waters of the Navajo Nation shall be free from pollutants in amounts or combinations that, for any duration:

1 . Cause injury to, are toxic to, or otherwise adversely affect human health, public safety, or public welfare.
2 . Cause injury to, are toxic to, or otherwise adversely affect the habitation, growth, or propagation of indigenous aquatic plant and animal communities or any member of these communities; of any desirable non-indigenous member of these communities; of waterfowl accessing the water body; or otherwise adversely affect the physical, chemical, or biological conditions on which these communities and their members depend.
3. Settle to form bottom deposits, including sediments, precipitates and organic materials, that cause injury to, are toxic to, or otherwise adversely affect the habitation, growth or propagation of indigenous aquatic plant and animal communities or any member of these communities; of any desirable non-indigenous member of these communities; of waterfowl accessing the water body; or otherwise adversely affect the physical, chemical, or biological conditions on which these communities and their members depend.
4 . Cause physical, chemical, or biological conditions that promote the habitation, growth, or propagation of undesirable, non-indigenous species of plant or animal life in the water body.
5. Cause solids, oil, grease, foam, scum, or any other form of objectionable floating debris on the surface of the water body; may cause a Elm or iridescent appearance on the surface of the water body; or that may cause a deposit on a shoreline, on a bank, or on aquatic vegetation.
6. Cause objectionable odor in the area of the water body.
7. Cause objectionable taste, odor, color, or turbidity in the water body.
8. Cause objectionable taste in edible plant and animal life, including waterfowl, that reside in, on, or adjacent to the water body.

SECTION C. PERMIT REOPENER

Should any of the monitoring indicate that the discharge causes, has the reasonable potential to cause, or contributes to excursions above water quality criteria, the permit may be reopened for the imposition of water quality based limits and/or whole effluent toxicity limits. Also, this permit may be modified, in accordance with the requirements set forth at 40 CFR Parts 122.44 and 124.14, to include appropriate conditions or limits to address demonstrated effluent toxicity based on newly available information, or to implement any EPA-approved new Tribal water quality standards.

This permit authorizes the discharge of wastewater from over 110 outfalls in 3 distinct subcategories. Throughout the permit term, as mine operations continue in a linear fashion, new outfall locations may become necessary to treat runoff and other outfalls may need to be authorized under a different subcategory. Therefore, EPA may modify the list of Outfalls in the Appendixes during the permit term to add, terminate or reclassify a discharge that occurs during the anticipating course of the existing mining activities. This will be accomplished thru a minor modification of the permit in accordance with 40 CFR Part 122.63. The permit may be reopened to authorize new outfalls for an area not currently being mined through a major modification to the existing permit 40 CFR Part 122.63.

SECTION D. MONITORING AND REPORTING

1. Reporting of Monitoring Results

a. Monitoring results shall be reported on Discharge Monitoring Report (ADMR@) forms (EPA No. 3320-1) to be supplied by the EPA Regional Administrator, to the extent that the information reported may be entered on the forms. Results of the Seep Monitoring and Management Plan shall be reported in a separate format, as specified in Section A.5 of the permit, and shall be submitted yearly to EPA.

Monitoring results obtained during the previous three (3) months shall be summarized for each month and submitted on forms to be supplied by the EPA Regional Administrator, to the extent that the information reported may be entered on the forms. Monitoring results obtained from sampling any discharge shall be entered directly on the DMR forms. In cases where No Discharge has occurred, monitoring results may be reported in narrative format due the large number (over 100) of outfalls permitted.

The results of all monitoring required by this permit shall be submitted in such a format as to allow direct comparison with the limitations and requirements of the permit. Unless otherwise specified, discharge flow shall be reported in terms of the average flow over that 30 day period. These reports are due January 28, April 28, July 28, and October 28 of each year. Duplicate signed copies of these, and all other reports required herein, shall be submitted to the Regional Administrator at the following addresses:

NPDES Compliance Office
Environmental Protection Agency (WTR-7)
75 Hawthorne Street
San Francisco, CA 94105

Telephone: (415) 972-3505

Navajo Nation Environmental Protection Agency
Navajo Nation EPA
P.O. Box 339
Window Rock, AZ 86515
Telephone: (928) 871-7185

Hopi Tribe Department of Natural Resources
Water Resources Office
P.O. Box 123
Kykotsmovi, AZ 86039
Telephone: (928) 734-2441

b. For effluent analyses, the permittee shall utilize an EPA-approved analytical method with a Method Detection Limit (MDL) that is lower than the effluent limitations (or lower than applicable water quality criteria if monitoring is required but no effluent limitations have been established.) MDL is the minimum concentration of an analyte that can be detected with 99% confidence that the analyte concentration is greater than zero, as defined by the specific laboratory method listed in 40 CFR Part 136. The procedure for determination of a laboratory MDL is in 40 CFR Part 136, Appendix B.

c. If all published MDLs are higher than the effluent limitations (or applicable criteria concentrations), the permittee shall utilize the EPA-approved analytical method with the lowest published MDL.

d. The permittee shall develop a Quality Assurance (QA) Manual/QA Plan. The purpose of the QA Manual is to assist in planning for the collection and analysis of samples and explaining data anomalies if they occur. As appropriate and applicable, the QA Manual shall include the details enumerated below. The QA Manual shall be retained on the permittee=s premises and be available for review by USEPA or Navajo Nation EPA upon request. The permittee shall review its QA Manual annually and revise it when appropriate. Throughout all field sampling and laboratory analyses, the permittee shall use quality assurance/quality control (QA/QC) procedures as documented in their QA Manual.

i. Project Management including roles and responsibilities of the participants; purpose of sample collection; matrix to be sampled; the analytes or compounds being measured; applicable technical,

regulatory, or program-specific action criteria; personnel qualification requirements for collecting samples.

ii. Sample collection procedures; equipment used; the type and number of samples to be collected including QA/QC samples (i.e., background samples, duplicatives, and equipment or field blanks); preservatives and holding times for the samples (see 40 CFR Part 136.3).

iii. Identification of the laboratory to be used to analyze the samples; provisions for any proficiency demonstration that will be required by the laboratory before or after contract award such as passing a performance evaluation sample; analytical method to be used; required QC results to be reported (e.g., matrix spike recoveries, duplicate relative percent differences, blank contamination, laboratory control sample recoveries, surrogate spike recoveries, etc.) and acceptance criteria; and corrective actions to be taken by the permittee or the laboratory as a result of problems identified during QC checks.

iv. Discussion of how the permittee will perform data review and requirements for reporting of results to USEPA or Navajo Nation EPA to include resolving of data quality issues and identifying limitations on the use of the data.

e. Sample collection shall be performed as stated in the QA Manual. The QA Manual shall include a discussion on the preservation and handling, preparation and analysis of samples as described in the most recent edition of 40 CFR Part 136.3, unless otherwise specified in this permit.

2. Monitoring and Records

Records of monitoring information shall include:

a. Date, exact location, and time or sampling or measurements performed, preservatives used;
b. Individual(s) who performed the sampling or measurements;
c. Date(s) analyses were performed;
d. Laboratory(ies) which performed the analyses;
e. Analytical techniques or methods used;
f. Any comments, case narrative or summary of results produced by the laboratory.

These should identify and discuss QA/QC analyses performed concurrently during sample analyses and should specify whether they met project and 40 CFR Part 136 requirements. The summary of results must include information on initial and continuing calibration, surrogate analyses, blanks, duplicates, laboratory control samples, matrix spike and matrix spike duplicate results, sample receipt condition, holding times, and preservation.

g. Summary of data interpretation and any corrective action taken by the permittee.

h. Effluent limitations for analytes/compounds being analyzed.

3. Twenty Four-Hour Reporting of Noncompliance

The permittee shall report any compliance which may endanger human health or the environment. This information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances to the following persons or their offices:

CWA Compliance Office Manager	Navajo Nation EPA
U.S. EPA Region 9	Attn: Patrick Antonio
(415) 972-3505	(928) 871-7185

If the permittee is unsuccessful in contacting the person above, the permittee shall report by 9 a.m. on the first business day following the noncompliance. A written submission shall also be provided within five (5) days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including dates and times, and, if the noncompliance has not been corrected, the time it is expected to continue; and steps or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

SECTION E. INSPECTION AND ENTRY

The permittee shall allow the Director, or an authorized representative, upon the presentation of credentials and such other documents as may be required by law, to perform inspections under authority of Section 10: Inspection and Entry of the EPA Region 9 AStandard Federal NPDES Permit Conditions,@ dated June 3, 2002, as attached.

SECTION F. DEFINITIONS

The following definitions shall apply unless otherwise specified in the permit:

1. ADiscrete sample@ means any individual sample collected in less than 15 minutes.

2. ADaily discharge@ means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar for purposes of sampling. For pollutants with limitations expressed in terms of mass, the Adaily discharge@ is calculated as the total mass of the pollutant discharges over the sampling day. For pollutants with limitations expressed in other units of measurement, the Adaily discharge@ is calculated as the average measurement of the pollutant over the sampling day. ADaily discharge@ determination of concentration made using a composite sample shall be the concentration of the composite sample. When grab samples are used, the Adaily discharge@ determination of concentration shall be the arithmetic average (weighted by flow value) of all samples collected during that sampling day.

3. ADaily average@ discharge limitation means the highest allowable average of Adaily discharges@ over a calendar month, calculated as the sum of all Adaily discharges@ measured during a calendar month divided by the number of Adaily discharges@ measured during that month.

4. ADaily maximum@ concentration means the measurement made on any single discrete sample of composite sample.

5. ADaily maximum@ mass limit means the highest allowable Adaily discharge@ by mass during any calendar day.

6. A Acomposite sample@ means, for flow rate measurements, the arithmetic mean of no fewer than 4 individual measurements taken at equal intervals for one hour or for the duration of discharge, whichever is shorter. A composite sample means, for other than flow rate measurements, a combination of 4 individual portions obtained at equal time intervals for 4 hours or for the duration of the discharge, whichever is shorter. The volume of each individual portion shall be directly proportional to the discharge flow rate at the time of sampling. The sampling period shall coincide with the period of maximum discharge flow.

7. A Amonthly or weekly average@ concentration limitation means the arithmetic mean of consecutive measurements made during a calendar month or weekly period, respectively.

8. A Amonthly or weekly average@ mass limitation means the total discharge by mass during a calendar monthly or weekly period, respectively, divided by the number of days

in the period that the facility was discharging. Where less than daily sampling is required by this permit, the monthly or weekly average value shall be determined by the summation of all the measured discharges by mass divided by the number of days during the monthly or weekly period when the measurements were made.

APPENDIX A – "Alkaline Mine Drainage"

Serial Number/ Outfall Number	Latitude Deg.Min.Sec.	Longitude Deg.Min.Sec.	Receiving Water
005/N5-A	36-31-15	110-24-45	Coal Mine Wash
008/N10-A1	36-32-45	110-22-30	Coal Mine Wash
010/J3-A	36-28-45	110-25-00	Coal Mine Wash Trib.
012/N6-E	36-30-30	110-25-15	Coal Mine Wash Trib.
013/N10-B	36-33-00	110-22-15	Coal Mine Wash Trib.
014/N10-D	36-32-30	110-23-00	Coal Mine Wash Trib.
018/J3-D	36-28-15	110-24-00	Moenkopi Tributary
024/N14-F	36-30-30	110-18-30	Moenkopi Tributary
025/N14-G	36-30-30	110-18-15	Moenkopi Tributary
026/MW-A	36-27-30	110-23-45	Moenkopi Wash
027/MW-B	36-27-30	110-23-45	Moenkopi Wash
030/J16-D	36-30-00	110-18-30	Moenkopi Tributary
033/J16-G	36-29-45	110-19-00	Moenkopi Tributary
039/N14-H	36-30-45	110-17-30	Moenkopi Tributary
045/WW-6	36-30-00	110-22-15	Moenkopi Tributary
048/J7-G	36-25-00	110-24-15	Red Peak Valley
052/J7-K	36-24-30	110-23-00	Sagebrush Wash
069/J7-I	36-24-45	110-24-30	Yucca Flat Wash Trib.
070/J7-J	36-24-30	110-24-30	Yucca Flat Wash Trib.
071/J7-M	36-24-15	110-24-15	Yucca Flat Wash Trib.
079/J21-A	36-26-15	110-14-45	Dinnebito Wash
081/N1-O	36-32-00	110-24-00	Coal Mine Wash
082/N5-E	36-31-15	110-25-00	Coal Mine Wash
086/WW-4	36-26-45	110-24-45	Moenkopi Wash
087/WW-9	36-23-45	110-24-45	Yucca Flat Wash Trib.
088/WW-9A	36-23-45	110-24-45	Yucca Flat Wash Trib.
089/WW-9B	36-23-45	110-24-45	Yucca Flat Wash Trib.
090/WW-9C	36-24-15	110-24-30	Yucca Flat Wash Trib.
141/J3-F	36-28-00	110-25-15	Coal Mine Wash Trib.
142/J3-G	36-28-00	110-25-15	Coal Mine Wash Trib.
143/N7-D	36-32-30	110-25-45	Yellow Water Canyon Trib.
144/N7-E	36-32-30	110-25-30	Yellow Water Canyon
147/J7-A	36-25-30	110-23-30	Red Peak Valley
148/J21-C	36-26-00	110-15-30	Dinnebito Wash
150/N6-G	36-29-30	110-23-00	Coal Mine Wash
151/N6-H	36-29-30	110-23-00	Coal Mine Wash
153/N6-I	36-31-45	110-24-15	Coal Mine Wash
157/N6-J	36-31-45	110-24-00	Coal Mine Wash
159/N11-A	36-32-20	110-22-40	Coal Mine Wash
160/N11-C	36-32-25	110-22-35	Coal Mine Wash
161/N11-E	36-32-35	110-22-25	Coal Mine Wash
162/N11-G	36-32-30	110-21-40	Coal Mine Wash

APPENDIX A – "Alkaline Mine Drainage" - Continued

163/J7-B1	36-25-10	110-23-58	Red Peak Valley
164/N6-L	36-31-58	110-23-58	Coal Mine Wash
165/N6-M	36-32-12	110-23-27	Coal Mine Wash
168/N14-T	36-30-20	110-18-20	Moenkopi Tributary
169/J7-R	36-24-05	110-24-00	Moenkopi Tributary
170/J7-S	36-24-05	110-23-50	Yucca Flat Wash
171/J7-T	36-24-00	110-23-40	Yucca Flat Wash
172/J7-U	36-24-10	110-23-30	Yucca Flat Wash
173/J7-V	36-24-10	110-23-20	Yucca Flat Wash
176/J21-F	36-25-23	110-16-00	Dinnebito Wash
177/J21-G	36-24-44	110-16-40	Dinnebito Wash
178/J27-RC	36-27-08	110-23-02	Moenkopi Tributary
179/J7-JR	36-26-13	110-19-52	Red Peak Valley Wash
180/J19-A	36-27-28	110-19-24	Reed Valley Wash
181/J19-B	36-27-16	110-20-10	Red Peak Valley Wash
182/J19-D	36-26-50	110-19-55	Red Peak Valley Wash
183/J19-E	36-26-42	110-19-55	Red Peak Valley Wash
184/N9-A	36-34-49	110-23-56	Yellow Water Canyon
185/N9-B	36-33-49	110-24-13	Yellow Water Canyon
186/N9-C	36-33-23	110-24-49	Yellow Water Canyon
187/N9-D	36-33-18	110-25-02	Yellow Water Canyon
188/N9-E	36-32-56	110-25-24	Yellow Water Canyon
189/N9-F	36-32-44	110-25-31	Yellow Water Canyon
190/N9-G	36-33-27	110-25-51	Yazzie Wash
191/N9-H	36-33-58	110-25-46	Yazzie Wash
192/N9-I	36-34-13	110-25-32	Yazzie Wash
193/N9-J	36-34-25	110-25-24	Yazzie Wash
194/N9-K	36-33-43	110-25-57	Yazzie Wash

APPENDIX B – "Coal Preparation & Associated Areas"

Serial Number/ Outfall Number	Latitude Deg.Min.Sec.	Longitude Deg.Min.Sec.	Receiving Water
001/N1-F	36-31-45	110-24-45	Coal Mine Wash
002/N1-L	36-31-45	110-24-15	Coal Mine Wash
003/N1-M	36-32-45	110-24-15	Coal Mine Wash
009/N10-C	36-32-00	110-24-00	Coal Mine Wash
016/N12-C	36-32-15	110-23-15	Coal Mine Wash Trib.
017/BM-A1	36-26-30	110-24-00	Moenkopi Tributary
043/N14-Q	36-30-00	110-19-15	Moenkopi Tributary
047/J7-DAM	36-25-30	110-23-30	Red Peak Valley
054/N1-AC	36-32-00	110-25-45	Yellow Water Canyon
082/N5-E	36-31-15	110-25-00	Coal Mine Wash
083/N5-F	36-31-15	110-25-00	Coal Mine Wash
094/N10-B1	36-33-00	110-22-15	Coal Mine Wash Trib.
095/KM-D	36-31-30	110-25-15	Coal Mine Wash Trib.
098/BM-SS	36-27-00	110-23-45	Moenkopi Tributary
099/J3-E	36-28-45	110-23-30	Moenkopi Tributary
103/N14-B	36-31-00	110-20-30	Moenkopi Tributary
104/N14-C	36-30-00	110-19-15	Moenkopi Tributary
105/BM-B	36-26-45	110-24-00	Moenkopi Tributary
106/KM-A3	36-31-45	110-26-00	Yellow Water Canyon
107/KM-B	36-31-30	110-26-00	Yellow Water Canyon
118/TPC-A	36-33-00	110-29-15	Long House Valley Trib.
126/TS-A	36-33-45	110-31-00	Klethla Valley
127/J16-A	36-30-00	110-18-15	Moenkopi Tributary
130/N14-P	36-31-00	110-20-30	Moenkopi Tributary
133/J16-L	36-30-45	110-19-30	Reed Valley
136/KM-TPB	36-31-15	110-28-00	Yellow Water Canyon Trib.
137/KM-TPB1	36-33-00	110-28-00	Yellow Water Canyon Trib.
139/KM-E	36-31-15	110-25-30	Coal Mine Wash Trib.
140/J2-A	36-29-00	110-25-45	Wild Ram Valley
149/J27-A	36-27-15	110-23-15	Moenkopi Tributary
152/TS-B	36-33-30	110-31-15	Klethla Valley
167/TPF-E	36-32-00	110-26-02	Yellow Water Canyon

APPENDIX C – "Western Alkaline Reclamation Areas"

Serial Number/ Outfall Number	Latitude Deg.Min.Sec.	Longitude Deg.Min.Sec.	Receiving Water
021/N6-C	36-29-30	110-22-45	Moenkopi Tributary
022/N6-D	36-29-15	110-23-00	Moenkopi Tributary
031/J16-E	36-30-00	110-18-30	Moenkopi Tributary
032/J16-F	36-30-00	110-18-45	Moenkopi Tributary
037/N6-F	36-30-45	110-22-30	Moenkopi Tributary
049/J7-CD	36-24-45	110-22-15	Sagebrush Wash
050/J7-E	36-24-45	110-22-30	Sagebrush Wash
051/J7-F	36-24-30	110-22-30	Sagebrush Wash
174/J21-D	36-25-39	110-15-37	Dinnebito Wash
175/J21-E	36-25-32	110-15-49	Dinnebito Wash